

Executive Summary: Quabbin Reservoir Watershed System: Land Management Plan 2007-2017

This document is the Division of Water Supply Protection, Office of Watershed Management's 10 year plan for the management of the DCR lands surrounding Quabbin Reservoir, and for the protection of associated natural and cultural resources. The contents of the six major sections of the plan are briefly summarized below.

Section 1, **Mission, Mandates, and Planning Process**, provides background on the organization of the agency responsible for the care and control of the watersheds that supply drinking water to roughly 40% of the population in Massachusetts. This section also details the legal mandates governing the agency and the relationship of this plan to other plans and to statewide initiatives, including the **MA Climate Protection Plan**, **green certification of state land management**, and the **development of forest reserves** across the state. Finally, Section 1 details the Division of Water Supply Protection's planning process and the process for soliciting, receiving and incorporating public input.

Section 2, **Description of Quabbin Reservoir Watershed Resources**, provides detailed descriptions of the resources that fall under the care and control of the OWM. The 119,940 acre watershed includes the agency's 24,529 acre, 412 billion gallon reservoir, which is capable of safely yielding 158 million gallons per day to the system. The agency controls 53,987 acres within the watershed and an additional 4,400 adjacent acres, in addition to the reservoir surface. This section initially identifies the four major categories of resources the agency protects and manages, the **Forests**, the **Wildlife**, the components of **Biological Diversity**, and the **Cultural Resources** of the watershed and adjacent holdings. The watershed cover is dominated by deciduous hardwoods (47%), followed by mixed woods (25%), and coniferous softwoods (21%) and overall species composition is dominated by oaks (30.9%) and white pine (28.2%). Wildlife at Quabbin is varied and abundant, dominated by species well-adapted to maturing forest and open water. Rare plant and animal species are well-documented and protected at Quabbin, as are unusual or exemplary natural communities. Cultural resources range from the remains of the four towns that were disincorporated to create the reservoir system to the mostly undiscovered, but model-predicted prehistoric artifacts.

Section 3, **Principles Guiding Watershed Management**, outlines the state of the science of watershed management by assembling research-based principles regarding at least the following, as they apply to watershed management:

- Watershed protection
- Water yield
- Water quality
- Forest hydrology
- The effects of natural and deliberate disturbances
- The role of management in building resistance and resilience in the forest cover
- The effects of wildlife on watershed management.

Section 4, **Watershed Management Goals**, sets forth broad goals based on the principles outlined in Section 3 and the mandates in Section 1 that drive the agency's agenda. These goals are provided for six major components of watershed management planning: **Drinking Water**

Protection, Land Protection, Land Management, Wildlife Management, Biological Diversity Protection, and Cultural Resources Protection.

The core of this Land Management Plan, based on the background provided in the previous four sections, is included in Section 5, **Management Plan Objectives and Methods: 2007-2017.**

This section is organized around the major topics of Land Protection, Management of Forested Lands, Management of Other DWSP Lands, Wildlife Management, Management and Protection of Biological Diversity, and the Protection of Cultural Resources. Key points include:

- Beyond the acquisition of 368 additional acres at Quabbin during the previous plan, the focus of land protection through direct acquisition is now primarily on the Wachusett Reservoir watershed. Payments-In-Lieu-Of-Taxes for Quabbin holdings were \$1,743,478 in FY2006. Significant effort is involved in the maintenance of boundaries, the prevention or processing of encroachment violations, and public education through the ranger program and interpretive services.
- The agency controls approximately 58,000 acres of land surrounding Quabbin Reservoir, of which approximately 12,000 is reserved from management (islands, steep slopes, wetlands, and designated no-management areas). The primary objective for management of the remaining 46,000 acres is to use small group selection silviculture to diversify age structure and species composition in order to build resistance and resilience critical to maintaining viable forest cover in the face of major natural disturbances that pass through this watershed protection forest. The importance of herbivore control and the management of invasive species are emphasized as a prerequisite to successful forest regeneration and management. Conservation Management Practices and the internal review process for harvesting are detailed as components of forest land management.
- In addition to forested lands, the agency manages a variety of other properties, including administrative areas, boat launch areas, open lands, viewsheds, recreation areas in Quabbin Park, and about 225 miles (~250 acres) of access roads.
- Wildlife management focuses on active management of habitats to support select species, including Bald Eagles, Common Loons, rare species associated with wetlands, and a variety of other target species or guilds of species, and on the management of populations or the impacts of these populations, including deer, beaver, certain water birds (Canada Goose, seagulls), and burrowing animals (near or on dam faces). Initial inventory work is underway to document the problems associated with a growing population of moose in the watershed.
- The protection of biological diversity focuses on the identification and supportive management of rare species and habitats, as well as the control of invasive, non-native species.
- Separate sections deal with the identification and management of prehistoric and historic cultural resources, primarily through mapping and selective management of vegetation and control over potential damage associated with logging equipment.

Section 6, Research, Inventory, and Monitoring Needs identifies gaps in management information that need to be filled to allow the agency to manage at its best.

Finally, this plan includes a **bibliography** of cited and general literature, a **glossary** of terms, several **appendices**, and an **index** of frequently encountered subjects.